

What is claimed is

1. A bearing holding structure comprising;

a bearing whose outer circumferential surface is formed in a spherical shape, and

first and second members having holding surfaces which extend axially in opposite directions to each other and between which the bearing is sandwiched, each of the holding surfaces being tapered axially to expand straight toward the opposing holding surface.

2. A bearing holding structure according to claim 1, wherein the first and second members have fixing surfaces which extend radially from the holding surfaces, respectively, and allow a radial and relative movement for adjusting an axial alignment among the first and second members and the bearing, when the fixing surfaces come in contact with each other in advance for sandwiching the bearing between the holding surfaces, and, then, are fixed to each other to inhibit the radial and relative movement so that first and second members rigidly hold the bearing.

3. A bearing holding structure according to claim 2, wherein one of the fixing surfaces is provided with at least a projection and another of the fixing surfaces is provided with at least an aperture, the projection being engaged with the aperture so as to be able to slightly move therein, when the fixing surfaces come in contact with each

other in advance, and, then, being deformed partly after having secured the axial alignment so that the fixing surfaces are fixed to each other.

4. A bearing holding structure according to claim 1, wherein at least one of the holding surfaces is provided with biasing means for urging the bearing against the opposing holding surface.

5. A bearing holding structure according to claim 4, wherein the biasing means is a plurality of elastically deformable pieces formed circumferentially by cutting radially at given angular intervals and raising in one direction a part of the first and second members corresponding to the one of the holding surfaces.

6. A motor comprising:

a cylinder-shaped yoke having an opening at an axial end thereof;

a plurality of magnets fixed to an inner circumference of the yoke;

a rotor disposed in a space of the yoke on an inner side of the magnets;

an end plate fixed to the opening, the end plate having an axially outwardly extending holding surface;

a bearing disposed in a center of the end plate for rotatably holding the rotor, an outer circumferential

surface of the bearing being formed in a spherical shape;  
and

a holding plate having axially inwardly extending holding surface, wherein the holding surfaces of the end and holding plates are opposed to each other so that the bearing is sandwiched therebetween and each of the holding surfaces is tapered axially to expand straight toward the opposing holding surface.

7. A motor according to claim 6, wherein the end and holding plates have fixing surfaces which extend radially from the holding surfaces, respectively, and allow a radial and relative movement to adjust an axial alignment among the end and holding plates and the bearing, when the fixing surfaces come in contact with each other in advance for sandwiching the bearing between the holding surfaces and, then, are fixed to each other to inhibit the radial and relative movement so that the end and holding plates hold the bearing.

8. A motor according to claim 7, wherein one of the fixing surfaces is provided with at least a projection and another of the fixing surfaces is provided with at least an aperture, the projection being engaged with the aperture so as to be able to slightly move therein, when the fixing surfaces come in contact with each other in advance, and, then, is partly deformed after having secured the axial

alignment so that the fixing surfaces are fixed to each other.